

ABSTRACT

Methods and apparatus are described for estimating a phase offset between two channels in a communication system to allow the use of both in determining a complex channel estimate. The phase offset arises from the system's rotation of only one of the two signaling channels prior to its transmission on one of the two antennas in transmission diversity mode. The phase offset is calculated in a receiver, such as a mobile station. For example, in a 3GPP system, the DPCH, which is rotated, and the CPICH, which is not, may be used in channel estimation.